

## REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Claims 15-34 are pending in this application. By this Amendment, claims 1-14 are canceled in favor of new claims 15-34. No new matter is added.

Applicants appreciate the Examiner's indication that canceled claims 3, 4, 12 and 13 recite allowable subject matter. The subject matter of canceled claim 3 is incorporated into new independent claims 15, 23 and 31. Similar features are incorporated into new independent claim 19. Independent claims 15, 19, 23 and 31 are not identical to claims 3 and 12 which the Examiner has indicated contain allowable subject matter. However, Applicants submit that claims 15, 19, 23 and 31 are allowable for the reasons that rendered claims 3 and 12 allowable. It is also submitted that independent claims 15, 19, 23 and 31 and their respective dependent claims are allowable for the reasons set forth below.

The Official Action objects to the specification because of the Abstract. The objection is obviated by the above amended Abstract. Thus, withdrawal of the objection is respectfully requested.

The Official Action rejects claims 1-14 under 35 U.S.C. §112, second paragraph. The rejection of canceled claims 1-14 is moot.

The Official Action rejects claims 1-14 under 35 U.S.C. §103(a) over Ishikawa et al. ("Ishikawa"), U.S. Patent No. 6,401,766,<sup>1</sup> in view of Hanagasaki et al.

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<sup>1</sup> During a brief November 13, 2008 telephone conference, the Examiner confirmed that the applied reference is U.S. Patent No. 6,401,766, as cited on Form PTO-892 attached to the Official Action. The Examiner indicated that "US Patent 5,279,336" included on page 3 of the Official Action is in error.

("Hanagasaki"), U.S. Patent No. 5,515,887. The rejection of canceled claims 1-14 is moot.

New claims 15-34 have been added and are patentable over Ishikawa and Hanagasaki at least for the reasons set forth below.

Ishikawa fails to disclose a first to-be-detected portion provided on a wire reel, as recited in independent claims 15, 19, 23 and 31. Ishikawa discloses a feed adjusting mechanism 103 having a magnetic sensor 117 that detects magnets 116 attached to the rotary shaft 114 of a feed gear 108 (see Fig. 3 and col. 4, lines 35-53). The Official Action asserts that each magnet 116 corresponds to the claimed first to-be-detected portion. However, the magnets 116 are provided on the rotary shaft 114 of the feed gear 108, not on the wire roller 106. Thus, contrary to the Official Action's assertion, Ishikawa fails to disclose a first to-be-detected portion provided on a wire reel, as recited in independent claims 15, 19, 23 and 31.

Moreover, Ishikawa fails to disclose a storing chamber for mounting a wire reel and provided with a first detecting apparatus, as recited in independent claims 15, 19 and 23. The Official Action asserts that Ishikawa's magnetic sensor 117 is provided with a chamber that stores the wire roller 106. However, as clearly shown in Fig. 1, feed means 4, which includes the magnetic sensor 117, is disposed in a location of the binding machine body 105 that is away from the chamber that stores the wire roller 106. The feed means 4 and magnetic sensor 117 are not located with the chamber that stores the wire roller 106. Thus, contrary to the Official Action's assertion, Ishikawa fails to disclose a storing chamber for mounting a wire reel and provided with a first detecting apparatus, as recited in independent claims 15, 19 and 23.

Further, Hanagasaki fails to disclose a second detecting apparatus that counts a second to-be-detected portion provided on the wire reel passing the second detecting apparatus during the amount of rotation of the wire reel detected by the first detecting apparatus, as recited in independent claim 15 and similarly recited in independent claims 19, 23 and 31.

Hanagasaki discloses a wire reel assembly that includes an optical sensor 22 that detects light reflected from a detection mark 17 on the wire reel 3 (see Figs. 2 and 3 and col. 4, lines 10-26, 48 and 49). Hanagasaki discloses that the number of the optical sensor detection marks 17 is not limited to one, and that two or more optical sensor detection marks 17 can be used (see col. 5, lines 18-20). However, even if the wire reel 3 included multiple detection marks 17, the optical sensor 22 does not count the detection marks 17. The optical sensor 22 simply detects movement (rotation) of the detection mark 17. For example, Hanagasaki discloses that the "optical sensor 22 consist[s] of a light emitting element and a light receiving element in such a manner that it can correspond to the moving locus of the optical sensor detection mark 17 of the wire reel 3" (col. 4, lines 12-15). Further, "when the amount of wire 4 on the wire reel 3 is depleted, exhausted or used up, the wire reel 3 ceases to rotate and at the same time the optical sensor detection mark 17 also stops rotating. In this case, since the 10 [sic] optical sensor detection mark 17 does not move to a position facing the optical sensor 22, the optical sensor 22 cannot detect the reflected light from the optical sensor detection mark 17" (col. 4, lines 53-60).

In other words, the optical sensor 22 detects movement of one or plural detection marks 17, but does not count the detection marks 17. That more than one

detection mark 17 may be added to the wire reel 3 simply improves the detection capability of the optical sensor 22 by reducing the possibility of a detection error that may result from the influence of variable environmental lighting conditions during the binding process (see col. 1, lines 50-53). Thus, Hanagasaki fails to disclose a second detecting apparatus that counts a second to-be-detected portion provided on the wire reel passing the second detecting apparatus during the amount of rotation of the wire reel detected by the first detecting apparatus, as recited in independent claim 15 and similarly recited in independent claims 19, 23 and 31.

Thus, the combination of features recited in the pending independent claims are not disclosed and would not have been obvious over the combination of Ishikawa and Hanagasaki. Thus, the pending independent claims are patentable over Ishikawa and Hanagasaki for these additional reasons.

Further, the pending dependent claims are patentable over the applied references at least by virtue of their dependence to the respective independent claims, as well as for the additional features these claims recite. For example, the combination of Ishikawa and Hanagasaki fails to disclose, and would not have rendered obvious, a wire reel provided with a flange and a round concave portion formed on a central portion of the flange, and that a first to-be-detected portion is formed on the flange and a second to-be-detected portion is housed within the round concave portion, as recited in claims 21, 22, 25, 26 and 33.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful

in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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